International Journal of Research and Development in Pharmacy & Life Sciences

Mini Review Open Access

Brief Notes on Pharmaceutical Support Networks to Help With Treatment

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Abstract

The Drug Information Center (DICmain)'s job is to give medical professionals information about drugs. The goal of this study was to evaluate how health care providers in Saudi Arabia used drug information centres to increase medication safety.

Keywords: Support networks; Pharmaceutical; Treatment; Health care

Introduction

Despite the ease of access to medication information, health care workers may only have limited opportunities and capacities for properly reviewing drug information. It was challenging to locate the best data and translate the findings into therapeutically useful information that applied to a particular patient. The Drug Information Center (DICmain)'s job is to respond to healthcare professionals' questions about drugs by researching and analysing relevant scientific literature. It then applies these findings to particular clinical scenarios and discusses potential solutions with the Enquirer. The Pan American Health Organization (PAHO) describes the DIC as operational units that promptly deliver scientific information about pharmaceuticals. At the King Saud University, College of Pharmacy, the first drug information centre in Saudi Arabia officially opened its doors in 1978. The medication and poison information centre of King Khalid University Hospital (KKUH) was established in 1980. (DPIC).As a part of clinical pharmacy services, the first ministry of health (MOH) DPIC [1-3] was created in 1989 at the major hospital in Riyadh. Answering inquiries, teaching medical personnel through educational seminars, and producing a pharmacy bulletin that is published weekly throughout all MOH hospitals are all duties of the centre. Drugdex, Textbooks, Iowa Drug Information Services (IDIS), PubMed, and Poisondex were determined to be the most frequently used sites in a previous study in Saudi Arabia for finding information about drugs. The duration of the service varied from five minutes to several weeks. Another investigation done in King Saud Medical City revealed that DPIC had fielded 139 questions in all during the course of a year. Pharmacists (61.2%) made the majority of the enquiries, followed by doctors (23.7%) and nurses (10.10%). The majority of the inquiries concerned drug administration and dose, with Lexi comp® as the key source of knowledge. Any circumstance that can be avoided that results in the misuse of pharmaceuticals or causes patients damage is referred to be a medication error. This includes prescribing, order communication, product [4] labelling, packaging, nomenclature, compounding, dispensing, distribution, administration, education, monitoring, and use, among other activities. Such events may be connected to professional practise, health care products, procedures, and systems. Medication error has been designated by the World Health Organization (WHO) as a focus area to improve patient safety since it has a direct impact on death and morbidity [5].

Methods

Study design, setting, and population

To assess the contribution of drug information centres to enhancing medication safety, a retrospective study was carried out. The study was carried out in the DPIC at Riyadh, Saudi Arabia's KKUH, an 850-bed tertiary academic hospital. Between November 2016 and [6-8] December 2018, 2975 questions were submitted, and every single one of them was kept in the questions bank. Each time a call comes in, employees or trainees working under the guidance of their preceptor complete a form detailing the query and the caller.

Ethical approval

On May 6, 2019, the Institutional Review Board at King Saud University's College of Medicine authorised this study; the approval code was 19/0614/IRB.

Data collection sheet and procedure

The DPIC questions bank was used to design and fill out the data collecting sheet. It contains data on the patient's demographics, the type of question asked, the type of response given, the caller's information, the reference(s) used to answer, the number of references [9] used, the medication(s), the medication(s)' class, the medication(s)' type, and the medication(s)' subclass. Patients, doctors, pharmacists, nurses, interns, and residents all had questions. Medication mistakes could occur during the prescribing, dispensing, administering, or monitoring stages.

The subclass of pharmaceutical errors included incorrect frequency, incorrect route of administration, incorrect medication, incorrect dose, dosage form, incorrect [10] strength, incorrect duration, incorrect time, incorrect storage, incorrect medication expiration, incorrect patient, and others. Dosage, administration, pregnancy, lactation, side effects, adverse drug events, interactions, compatibility, stability, pharmacokinetics, identification, vaccinations, dose adjustment, and extemporaneous preparation were among the types of questions considered in the study. Questions about non-drug-related topics [11] like pharmaceutical availability and approval were not included.

Potential near-misses include situations in which a doctor asks about inaccurate information prior to prescribing, a pharmacist asks about inaccurate information prior to dispensing, and when a caller inquires about inaccurate information that is already available.

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Received: 04-Aug-2022, Manuscript No: ijrdpl-22-72005, **Editor assigned:** 06-Aug-2022, PreQC No: ijrdpl-22-72005 (PQ), **Reviewed:** 18-Aug-2022, QC No: ijrdpl-22-72005, **Revised:** 22-Aug-2022, Manuscript No: ijrdpl-22-72005(R) **Published:** 29-Aug-2022, DOI: 10.4172/2278-0238.1000132

Citation: Haavid H (2022) Brief Notes on Pharmaceutical Support Networks to Help With Treatment. Int J Res Dev Pharm L Sci, 8: 132.

Statistical Analysis

Data were first gathered in an Excel spreadsheet and then analysed with SPSS version 26. The data were described using descriptive analysis, figures, and percentages, which also helped to pinpoint the most common type and subclass of drug error.

Discussion

Pharmaceuticals are chemicals with medical activity that are employed in the treatment, prevention, or diagnosis of illnesses. The difficulty in acquiring accurate information for the correct use of such medications, however, may have led to medication-related harms [12-16] or mistakes, as well as to subpar health outcomes and a higher risk of morbidity and mortality among patients. Because of their professional training or supervision by a drug information specialist, pharmacists are the most frequent presenters of drug information, which may help to reduce medication-related errors, according to previous study. To get the best patient outcomes, it is crucial to involve competent pharmacists. The majority of medication errors were potential errors, according to a descriptive study done in Brazil that detected and defined medication errors related to prescription information inquiries. The results of the current investigation, which discovered a higher rate [17] of potential errors, also corroborated these conclusions. That demonstrates the beneficial steps done by DPIC pharmacists who effectively addressed drug-related concerns voiced by other healthcare providers, ensuring the best possible patient care and avoiding potential mistakes. Our study discovered that the majority of mistakes are made when prescribing, and. also noted this. Other reviews that indicated prescribing errors as the most avoidable types of MEs since they occur in the early stages corroborated these findings. (2021) Council According to the NCCMERP and, medication errors are any preventable incident that results in the misuse of pharmaceuticals or causes patient damage. In this study, pharmacists and doctors got the majority of inquiries for drug information. These findings were consistent with a prior study by , which found that pharmacists got the majority of enquiries about drugs, followed by doctors and nurse. Researchers from two other studies, and -found that doctors were the most frequent users of pharmacological information. That was in line with earlier research done in many nations that showed doctors to be the most frequent inquirers. The majority of the study's inquiries concerned dose and administration, then interactions, then pregnancy and lactation, among other things. In a separate study. Found that drug identification was the most common sort of enquiry, followed by inquiries about drug safety or contraindications, negative drug reactions, and inquiries about pregnancies. When responding to inquiries for drug information in this study, medication data-base sources were most frequently cited (i.e. Lexicomp, Micromedex, and Sanford Guide). Although Drugdex, reference books, Iowa Drug Information Services (IDIS), PubMed, and Poisondex were listed as the most frequently used sources to respond to drug information inquiries by Asiri et al. Similar to this, a recent study by revealed that the most popular sources utilised to respond to drug knowledge queries were Micromedex, Up-to-date, IDIS, and Lexi-Drug Comp's Information Handbook. Lexi-Comp was the most popular drug information source in the United States, and Micromedex was also a popular choice among medical professionals, according to numerous international and national studies. The availability of resources at the study site and the preferences of the pharmacist or medical professional may be the cause of this variation among studies. According to a Saudi Arabian study that examined physicians' information-seeking habits and awareness of DPICs, about half of them used the services to find out about drugs, followed by requests for formulary additions and questions about poisons. These findings emphasise the need of pharmacists in providing fair, correct drug information by emphasising patient-oriented research. The current study has a few restrictions. The results came from a single institution in the capital of Saudi Arabia, and the limited sample size may have an impact on how generalizable they are. Additionally, the ability of drug information suppliers to describe the inquiries for the sake of error detection meant that some sorts of errors would be underestimated.

Results

Throughout the study period, 1336 drug information requests were evaluated, and 243 of those were used in the final analysis. The adult population received the majority of the questions (69.1%). Physicians (38.7%), pharmacists (48.1%), and nurses (9.5%) made up the majority of the enquiries.

Conclusion

These studies showed how DPIC pharmacists can improve the calibre of healthcare services by giving the inquirer with factual information. Additionally, it demonstrates their responsibility for avoiding drug errors that could endanger patients.

Acknowledgement

The researchers of this study would like to express their gratitude to King Saud University's Researchers Supporting Project (Project number RSP-2021/81).

Declaration of Competing Interest

The authors affirm that they have no known financial or interpersonal conflicts that would have appeared to have an impact on the research presented in this study.

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